REMARKS

Claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are currently pending in the application.

This amendment is in response to the Office Action of November 21, 2005.

Supplemental Information Disclosure Statements

Applicants note the filing of Supplemental Information Disclosure Statements herein on August 25, 2005 and November 23, 2005 and note that copies of the PTO/SB/08A forms were not returned with the outstanding Office Action. Applicants respectfully request that the information cited on the PTO/SB/08A forms be made of record herein.

35 U.S.C. § 102(b) Anticipation Rejections

Anticipation Rejection Based on Weng et al. (U.S. Patent 5,972,234)

Claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 were rejected under 35 U.S.C. § 102(b) as being anticipated by Weng et al. (U.S. Patent 5,972,234).

Applicants assert that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Turning to the cited prior art, Weng et al. describes a method for marking a semiconductor surface. Weng et al. describe a polymeric tape can be provided that is suitable for ablative photodecomposition. Column 4 lines 25-40. In other words, the mark which is to be formed in the semiconductor surface is first formed as a cavity through the tape using "high-intensity energy beams such as ultraviolet light or laser." Column 4 lines 32-33; *See also* column 2 lines 63-63, column 3 lines 6-11, column 3 lines 22-23, column 3 lines 27-30, column 3 lines 39-40, column 4 lines 52-54. After the mark has been formed *through* the tape, the tape is applied to the semiconductor surface. Column 4 line 57 – column 5 line 7. Finally, the mark is formed in the semiconductor surface by etching the semiconductor in the area exposed by the

mark formed in the tape. The tape protects the rest of the semiconductor surface from the etchant, such that the mark in the tape is patterned into the semiconductor surface. Column 5 lines 8-25. Finally, the tape is removed from the surface of the semiconductor, leaving the mark formed by the etchant. Column 5 lines 27 – 37. The tape has a thickness of about 0.5 mm and can be provided with an adhesive backing or without an adhesive backing. Column 5, lines 38-41. A suitable adhesive may be an acrylic type polymer. Column 4, lines 63, 64.

After carefully considering the cited prior art, the rejections, and the Examiner's comments, Applicants have amended the claimed invention to clearly distinguish over the cited prior art.

Applicants asset that the Weng et al. reference does not identically describe each and every element of the claimed inventions of presently amended independent claims 1, 9, and 17 to anticipate the claimed inventions of presently amended independent claims 1, 9, and 17 U.S.C. § 102. This is evidenced by the Office Action that rejects independent claims 1, 9, and 17 based upon either 35 U.S.C. § 102 or 35 U.S.C. § 103. Applicants assert that any rejection is improper based upon 35 U.S.C. § 102 of presently amended independent claims 1, 9, and 17 because each and every element of the claimed inventions is not identically described in the Weng et al. reference. If the Weng et al. reference identically described each and every element of the claimed inventions of presently amended independent claims 1, 9, and 17, there is no reason to reject such claims under 35 U.S.C. § 103.

Applicants assert that the cited prior art fails to teach or suggest the claim limitations of presently amended independent claims 1, 9, and 17 calling for "a tape comprising a flexible film material having a coefficient of thermal expansion substantially similar to the semiconductor device", "a flexible film material having a coefficient of thermal expansion substantially similar to the semiconductor device", "film material having a coefficient of thermal expansion substantially similar to the semiconductor device", "a first outermost adhesive layer comprising a mixture of electromagnetic radiation-curable components, the electromagnetic radiation-curable components providing a laser-markable surface upon exposure to an electromagnetic radiation source by curing and bonding to at least a portion of a semiconductor device when laser marking a semiconductor device" and "a second adhesive layer disposed between the tape and the first

outermost adhesive layer, the second adhesive layer comprising a mixture of electromagnetic radiation-curable components upon exposing to radiation the second adhesive layer performs at least one property of the adhesive facilitating peeling of the flexible film material when laser marking a semiconductor device". Applicants assert that, in contrast to the presently claimed inventions of presently amended independent claims 1, 9, and 17, the Weng et al. reference, at best, teaches or suggests a tape having one single adhesive layer, not a tape having multilayer adhesive. Further, Applicants assert that Weng et al. does not teach or suggest using a tape that has laser markable surface. While the Office the Office Action refers to column 2, lines 20-21 of Weng et al. as teaching or suggesting a marking rape form making an identification mark by a high-intensity energy beam, no such invention is either enabled, or described, or taught, or suggested in either the SUMMARY OF THE INVENTION, or the BRIEF DESCRIPTION OF THE DRAWINGS, or the DETAILED DESCRIPTION OF THE PREFERRED AND ALTERNATE EMBODIMENTS of the application, or the claimed inventions of the application in claims 1 through 22 thereof. As such, Applicants assert that any rejection based upon the Weng et al. reference is a hindsight reconstruction of the Applicants inventions based solely upon Applicants' disclosure because Weng et al. contains no such teaching or suggestion. In each instance of the various embodiments of the Weng et al. reference, the semiconductor device is marked using an etchant, not a laser. The claimed inventions of presently amended independent claims 1, 9, and 17 contain the claim limitations for a tape having at least two layers of adhesive thereon. The first layer of adhesive contains the claim limitation calling for "comprising a mixture of electromagnetic radiation-curable components, the electromagnetic radiation-curable components providing a laser-markable surface upon exposure to an electromagnetic radiation source by curing and bonding to at least a portion of a semiconductor device". The second layer of adhesive contains the claim limitation calling for "a mixture of electromagnetic radiation-curable components to radiation the second adhesive layer performs at least one property of the adhesive facilitating peeling of the flexible film material". The second layer of adhesive has different properties from the first layer of adhesive. The different properties of the first layer of adhesive and the second layer of adhesive are clearly distinct from each other as both described in the independent claims 1, 9, and 17 and in Applicants' disclosure. Such properties are set

forth in the claimed inventions of presently amended independent claims 1, 9, and 17. In contrast to the claimed inventions, the Weng et al. reference merely describes a single layer of adhesive.

Further, Applicants assert that to include radiation-curable components into any adhesive layer formed in the tape disclosed by Weng et al. would render the invention inoperable. Specifically, applying radiation would *cure* the adhesive layer, which would prevent a pattern from being formed through the tape. Therefore, no mark could be formed through the tape by any ablative photodecomposition process followed by the use of an etchant to form a mark on the semiconductor device if the adhesive layer of the tape were to include radiation-curable components. Applicants respectfully assert that a tape comprising an adhesive layer including radiation-curable components is not "any suitable tape of polymeric based material, which can be easily patterned by high-intensity energy beams such as ultraviolet light or laser" or is not any single layer of adhesive containing "arbitrary or imaginary layers within a single layer".

Additionally, Applicants assert that the Weng et al. reference merely describes a photodecomposition process employing an excimer type laser for ablating the polymeric based tape. The Weng et al. reference contains no description whatsoever as to how an excimer laser affects the adhesive. Applicants assert that absent any description as to how an excimer laser affects the adhesive used with the tape, any rejection based upon the Weng et al. reference is based solely upon Applicants' disclosure, not the cited prior art.

Accordingly, Applicants assert that claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are allowable.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on Weng et al. (U.S. Patent 5,972,234)

Claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Weng et al. (U.S. Patent 5,972,234). Applicants respectfully traverse this rejection, as hereinafter set forth.

Applicants assert that to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in

the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited prior art reference must teach or suggest all of the claim limitations. Furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants' disclosure.

After carefully considering the cited prior art, the rejections, and the Examiner's comments, Applicants have amended the claimed invention to clearly distinguish over the cited prior art.

Turning to the cited prior art, Weng et al. teaches or suggests a method for marking a semiconductor surface. Weng et al. describe a polymeric tape can be provided that is suitable for ablative photodecomposition. Column 4 lines 25-40. In other words, the mark which is to be formed in the semiconductor surface is first formed as a cavity through the tape using "high-intensity energy beams such as ultraviolet light or laser." Column 4 lines 32-33; *See also* column 2 lines 63-63, column 3 lines 6-11, column 3 lines 22-23, column 3 lines 27-30, column 3 lines 39-40, column 4 lines 52-54. After the mark has been formed *through* the tape, the tape is applied to the semiconductor surface. Column 4 line 57 – column 5 line 7. Finally, the mark is formed in the semiconductor surface by etching the semiconductor in the area exposed by the mark formed in the tape. The tape protects the rest of the semiconductor surface from the etchant, such that the mark in the tape is patterned into the semiconductor surface. Column 5 lines 8-25. Finally, the tape is removed from the surface of the semiconductor, leaving the mark formed by the etchant. Column 5 lines 27 – 37. The tape has a thickness of about 0.5 mm and can be provided with an adhesive backing or without an adhesive backing. Column 5, lines 38-41. A suitable adhesive may be an acrylic type polymer. Column 4, lines 63,64.

Applicants assert that the Weng et al. reference fails to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed inventions of presently amended independent claims 1, 9, and 17 because cited prior art fails to teach or suggest all the claim limitations and the suggestion to make the claimed combination and the reasonable expectation of success must is found solely in Applicants' disclosure, not the cited prior art.

Applicants assert that the cited prior art fails to teach or suggest the claim limitations of presently amended independent claims 1, 9, and 17 calling for "a tape comprising a flexible film material having a coefficient of thermal expansion substantially similar to the semiconductor device", "a flexible film material having a coefficient of thermal expansion substantially similar to the semiconductor device", "film material having a coefficient of thermal expansion substantially similar to the semiconductor device", "a first outermost adhesive layer comprising a mixture of electromagnetic radiation-curable components, the electromagnetic radiation-curable components providing a laser-markable surface upon exposure to an electromagnetic radiation source by curing and bonding to at least a portion of a semiconductor device when laser marking a semiconductor device" and "a second adhesive layer disposed between the tape and the first outermost adhesive layer, the second adhesive layer comprising a mixture of electromagnetic radiation-curable components upon exposing to radiation the second adhesive layer performs at least one property of the adhesive facilitating peeling of the flexible film material when laser marking a semiconductor device". Applicants assert that, in contrast to the presently claimed inventions of presently amended independent claims 1, 9, and 17, the Weng et al. reference, at best, teaches or suggests a tape having one single adhesive layer, not a tape having multilayer adhesive. Further, Applicants assert that Weng et al. does not teach or suggest using a tape that has laser markable surface. While the Office the Office Action refers to column 2, lines 20-21 of Weng et al. as teaching or suggesting a marking rape form making an identification mark by a high-intensity energy beam, no such invention is either enabled, or described, or taught, or suggested in either the SUMMARY OF THE INVENTION, or the BRIEF DESCRIPTION OF THE DRAWINGS, or the DETAILED DESCRIPTION OF THE PREFERRED AND ALTERNATE EMBODIMENTS of the application, or the claimed inventions of the application in claims 1 through 22 thereof. As such, Applicants assert that any rejection based upon the Weng et al. reference is a hindsight reconstruction of the Applicants inventions based solely upon Applicants' disclosure because Weng et al. contains no such teaching or suggestion. In each instance of the various embodiments of the Weng et al. reference, the semiconductor device is marked using an etchant, not a laser. The claimed inventions of presently amended independent claims 1, 9, and 17 contain the claim limitations for a tape having at least two layers of adhesive

thereon. The first layer of adhesive contains the claim limitation calling for "comprising a mixture of electromagnetic radiation-curable components, the electromagnetic radiation-curable components providing a laser-markable surface upon exposure to an electromagnetic radiation source by curing and bonding to at least a portion of a semiconductor device". The second layer of adhesive contains the claim limitation calling for "a mixture of electromagnetic radiation-curable components to radiation the second adhesive layer performs at least one curing onto portions of the first outermost adhesive layer and losing adhesive properties for facilitating peeling of the flexible film material". The second layer of adhesive has different properties from the first layer of adhesive. The different properties of the first layer of adhesive and the second layer of adhesive are clearly distinct from each other as both described in the independent claims 1, 9, and 17 and in Applicants' disclosure. Such properties are set forth in the claimed inventions of presently amended independent claims 1, 9, and 17. In contrast to the claimed inventions, the Weng et al. reference merely teaches or suggests an single layer of adhesive.

Further, Applicants assert that to include radiation-curable components into any adhesive layer formed in the tape disclosed by Weng et al. would render the invention inoperable. Specifically, applying any energy would *cure* the adhesive layer, which would prevent a pattern from being formed through the tape. Therefore, no mark could be formed through the tape by any ablative photodecomposition process followed by the use of an etchant to form a mark on the semiconductor device if the adhesive layer of the tape were to include radiation-curable components. Applicants respectfully assert that a tape comprising an adhesive layer including radiation-curable components is not "any suitable tape of polymeric based material, which can be easily patterned by high-intensity energy beams such as ultraviolet light or laser" or is not any single layer of adhesive containing "arbitrary or imaginary layers within a single layer".

Additionally, Applicants assert that the Weng et al. reference merely describes a photodecomposition process employing an excimer type laser for ablating the polymeric based tape. The Weng et al. reference contains no description whatsoever as to how an excimer laser affects the adhesive. Applicants assert that absent any description as to how an excimer laser affects the adhesive used with the tape, any rejection based upon the Weng et al. reference is based solely upon Applicants' disclosure, not the cited prior art.

Yet further, Applicants assert that the sole basis for any rejection under 35 U.S.C. § 103 based upon the cited combination of the prior art is solely Applicants' disclosure. Applicants assert that such is clearly evident by the comments in the Office Action directed to the fact that nowhere in the Weng et al. reference is there any teaching or suggestion for multiple layers of adhesive. Solely the Applicants' disclosure contains any such teaching or suggestion.

Applicants assert that such cited prior art does not and cannot establish a *prima facie* case of obviousness under 35 U.S.C. § 103 because such prior art fails to teach or suggest all the claim limitations and the suggestion to make the claimed combination and the reasonable expectation of success must is found solely in Applicants' disclosure, not the cited prior art.

Accordingly, Applicants assert that claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are allowable.

Applicants submit that claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are clearly allowable over the cited prior art.

Applicants request the allowance of claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 and the case passed for issue.

Respectfully submitted,

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